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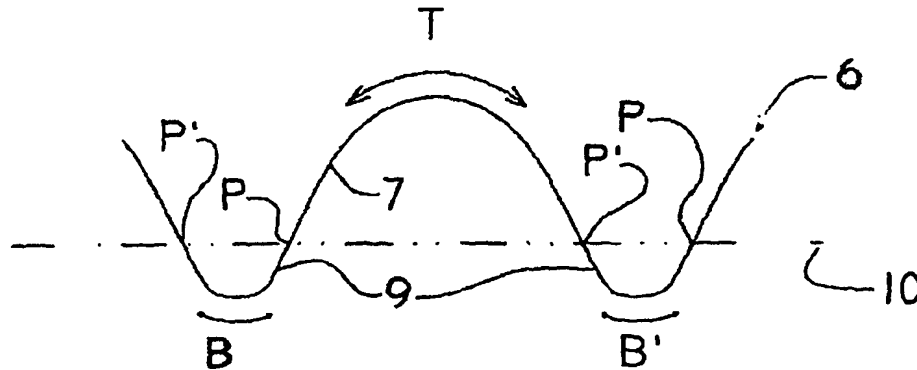
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(54) Title: A FLEXIBLE, TUBULAR DEVICE E.G. A BELLOWS



(57) Abstract: The present invention concerns a flexible, tubular device e.g. a bellows with an internal diameter up to 60 millimeters, said device comprising one or more corrugated convolutions (2), said convolutions having an overall bell-like shape with rounded top portions (T) and rounded bottom portions (B,B'). The novel aspects involve that the curvature of the outside surface of the convolutions (2) is numerically smaller at the top portions (T) than at the bottom portions (B,B'), said curvature being derived from a curve (6) defined as the intersection of the outside surface (4) of the device and a plane through the longitudinal axis (8) of the device, as well as they involve that the curvature of said curve changes sign only once at a change position (P,P') located between a top portion (T) and an adjacent bottom portion (B,B'), and that the length of a first section (7) on the curve (6) is at least 10% longer than the length of a second section (9) on the curve, said first section (7) extending from one change position (P) to an adjacent change position (P) via a top portion (T), and said second section (9) extending from one change position (P) to an adjacent change position (P') via a bottom portion (B,B'). This provides an improved design with increased durability due to increased flexibility at lower stresses, compared to the prior art.



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# INTERNATIONAL SEARCH REPORT

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F16L11/15

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 803 132 A (LUPKE MANFRED A A) 8 September 1998 (1998-09-08) figure 6 ---	1-12
X	US 3 561 492 A (KAUDER KNUT ET AL) 9 February 1971 (1971-02-09) figure ---	1-12
X	US 6 006 788 A (JUNG PATRICE JOEL LOUIS ET AL) 28 December 1999 (1999-12-28) column 2, line 41 - line 45; figure 4 ---	1-12
X	DE 26 20 718 A (SEMPERIT GMBH) 6 October 1977 (1977-10-06) page 4 last paragraph figure --- -/--	1-12

☒ Further documents are listed in the continuation of box C.

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>US 4 246 937 A (MUELLER HANS R) 27 January 1981 (1981-01-27) figure 1</p> <p>-----</p>	1-12

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Information on patent family members

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